What is claimed is:

1. An isolated polynucleotide selected from the group consisting of:

(a) a polynucleotide comprising the nucleotide sequence of SEQ ID NO: 1;

(b) a polynucleotide comprising the nucleotide sequence of a β-amyloid peptide-binding protein (BBP) of clone BBP1-fl deposited under accession number ATCC 98617;

(c) a polynucleotide encoding a β-amyloid peptide-binding protein (BBP) encoded by the cDNA insert of clone BBP1-fl deposited under accession number ATCC 98617;

(d) a polynucleotide comprising the nucleotide sequence of SEQ ID NO: 1 from nucleotide 202 to nucleotide 807;

(e) a polynucleotide comprising the nucleotide sequence of a β-amyloid peptide-binding protein (BBP) of clone pEK196 deposited under accession number ATCC 98399;

(f) a polynucleotide encoding a β-amyloid peptide-binding protein (BBP) encoded by the cDNA insert of clone pEK196 deposited under accession number ATCC 98399;

(g) a polynucleotide encoding a protein comprising the amino acid sequence of SEQ ID NO: 2;

(h) a polynucleotide encoding a protein comprising a fragment of the amino acid sequence of SEQ ID NO: 2 having human β-amyloid peptide binding activity, the fragment comprising the amino acid sequence from amino acid 68 to amino acid 269 of SEQ ID NO: 2;

(j) a polynucleotide which is an allelic variant of the polynucleotide of (a)-(f) above;

(k) a polynucleotide which encodes a species homologue of the protein of (g)-(h) above; and

(l) a polynucleotide capable of hybridizing under stringent conditions to any one of the polynucleotides specified in (a)-(h).

2 The polynucleotide of claim 1 wherein said polynucleotide is operably linked to at least one expression control sequence.

3. A host cell transformed with the polynucleotide of claim 2.

4. The host cell of claim 3 wherein said cell is a prokaryotic or eukaryotic cell.

5. A process for producing a protein encoded by the polynucleotide of claim 2 which process comprises (a) growing a culture of the host cell of claim 3 in a suitable culture medium; and (b) purifying the protein from the culture medium.

6. A protein produced according to the process of claim 5.

7. A protein comprising an amino acid sequence selected from the group consisting of:

(a) the amino acid sequence of SEQ ID NO: 2;

(b) the amino acid sequence of SEQ ID NO: 2 from amino acid 68 to amino acid 269;

(c) the amino acid sequence encoded by the cDNA insert of clone BBP1-fl deposited under accession number ATCC 98617; and

(d) fragments of the amino acid sequence of SEQ ID NO: 2 comprising the amino acid sequence from amino acid 185 to amino acid 217 of SEQ ID NO: 2.

8. The protein of claim 7, wherein said protein comprises the amino acid sequence of SEQ ID NO: 2.

9. A fusion protein comprising a BBP1 linked to a heterologous protein or peptide sequence.

10. The fusion protein of claim 9 in the BBP1 has the amino acid sequence of SEQ ID NO: 2.

11. An oligonucleotide which encodes an antisense sequence complementary to a portion of BBP1 sequence of SEQ ID NO: 1 and which inhibits expression the BBP1 gene.

12. A method for determining a polynucleotide encoding a β-amyloid peptide-binding protein (BBP) in a sample comprising the steps of

(a) hybridizing to a sample a probe specific for said polynucleotide under conditions effective for said probe to hybridize specifically to said polynucleotide; and (b) determining the hybridization of said probe to polynucleotides in the sample, wherein said probe comprises a nucleic acid sequence having a region of 20 or more base pairs at least 90% identical to the polynucleotide sequence of SEQ ID NO: 1.

13. A method for determining a polynucleotide encoding a β-amyloid peptide-binding protein (BBP) in a sample comprising the steps of (a) hybridizing to a sample a probe specific for said polynucleotide under conditions effective for said probe to hybridize specifically to said polynucleotide; and (b) determining the hybridization of said probe to polynucleotides in the sample, wherein said probe comprises a nucleic acid sequence having a region of 20 or more base pairs at least 90% identical to the polynucleotide sequence of the cDNA insert of ATCC 98617 or ATCC 98399.

14. An antibody that binds specifically to a polypeptide comprising a region at least 90% identical in sequence to the amino acid sequence of SEQ ID NO: 2.

15. An antibody that binds specifically to a polypeptide comprising a region at least 90% identical in sequence to the amino acid sequence of the β-amyloid peptide binding protein encoded by the cDNA insert of ATCC 98617.

16. A method for detecting in a sample a polypeptide comprising a region at least 90% identical to the amino acid sequence of SEQ ID NO: 2, said method comprising (a) incubating with a sample a reagent that bind specifically to said polypeptide under conditions effective for specific binding; and (b) determining the binding of said reagent to said polypeptide the sample.

17. A method for detecting in a sample a polypeptide comprising a region at least 90% identical in sequence to the amino acid sequence of the β-amyloid peptide binding protein encoded by the cDNA

insert of ATCC 98617, said method comprising (a) incubating with a sample a reagent that bind specifically to said polypeptide under conditions effective for specific binding; and (b) determining the binding of said reagent to said polypeptide the sample.

18. A method for diagnosing a disease characterized by aberrant expression of human β-amyloid peptide (BAP), comprising (a) incubating a sample indicative of the aberrant expression of human β-amyloid peptide with a reagent comprising a polypeptide comprising a region at least 90% identical to the amino acid sequence of SEQ ID NO: 2 under conditions effective for specific binding of said reagent to said human β-amyloid peptide; and (b) determining the binding of said reagent to said peptide in the sample.

19. A method for diagnosing a disease characterized by aberrant expression of human β-amyloid peptide, comprising (a) incubating a sample indicative of the aberrant expression of human β-amyloid peptide with a reagent comprising a polypeptide comprising a region at least 90% identical to the amino acid sequence of the β-amyloid peptide binding protein encoded by the cDNA insert of ATCC 98617 under conditions effective for specific binding of said reagent to said human β-amyloid peptide; and (b) determining the binding of said reagent to said peptide in the sample.

20. A diagnostic process comprising analyzing for the presence of a polynucleotide of claim 1 in a sample derived from a host.

21. A method for identifying compounds which regulate the activity of a β-amyloid peptide binding protein comprising (a) incubating a sample comprising human β-amyloid peptide in a test medium containing said test compound and a reagent comprising a polypeptide comprising a region at least 90% identical to the amino acid sequence of SEQ ID NO: 2 under conditions effective for specific binding of said reagent to said human β-amyloid peptide; (b) comparing the binding of said reagent to said peptide in the sample in the presence and absence of said test

compound; and (c) relating the difference between the binding is step (b) to the test compound regulating the activity of the a β-amyloid peptide binding protein.

22. A method for identifying compounds which regulate the activity of a β-amyloid peptide binding protein comprising (a) incubating a sample comprising human β-amyloid peptide in a test medium containing said test compound and a reagent comprising a polypeptide comprising a region at least 90% identical to the amino acid sequence of the β-amyloid peptide binding protein encoded by the cDNA insert of ATCC 98617 under conditions effective for specific binding of said reagent to said human β-amyloid peptide; (b) comparing the binding of said reagent to said peptide in the sample in the presence and absence of said test compound; and (c) relating the difference between the binding is step (b) to the test compound regulating the activity of the a β-amyloid peptide binding protein.

23. A method for the treatment of a patient having need to inhibit β-amyloid peptide accumulation in the brain comprising administering to the patient a therapeutically effective amount of the polypeptide of claim 7.

24. A transgenic or chimeric animal comprising the polynucleotide of claim 2.